WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

By F. G. TINGLEY

The month of February brought a cessation in the severe conditions of the eastern North Atlantic which had persisted with little interruption since the latter part of November. At Lerwick (Shetland Islands), where low pressure had been continuous and marked for a period of four months, there was a pronounced change to high pressure. The mean monthly pressure values at Lerwick for the several months (with departures from normal in parentheses) are as follows: October, 29.47 (−0.32); November, 29.44 (−0.26); December, 29.28 (−0.44); January, 29.37 (−0.33); February, 30.19 (+0.47). In connection with this rise in pressure attention is invited to a correspondingly marked fall in pressure over the Gulf of Alaska and neighboring regions referred to in the accompanying review of the weather of the North Pacific Ocean.

The general distribution of pressure in the North Atlantic area for February is shown in the following table:

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian), North Atlantic Ocean, February, 1930*

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Julianehaab, Greenland	29.45	(1)	29.96	20th	28.46	28th.
Belle Isle, Newfoundland	29.75	[2] 0.00	30.38	19th	28.68	9th.
Halifax, Nova Scotia	30.00	[3] +0.02	30.42	18th	29.56	5th.
Nantucket	30.05	[3] +0.05	30.54	17th	29.40	5th.
Hatteras	30.16	[3] +0.05	30.48	17th	29.60	5th.
Key West	30.08	[3] −0.02	30.22	9th	29.86	7th.
New Orleans	30.14	[3] +0.01	30.38	18th	29.78	4th.
Cape Gracias, Nicaragua	29.94	[3] −0.05	29.98	1st [4]	29.88	14th.[4]
Turks Island	30.11	[3] −0.03	30.22	27th	30.02	13th.[4]
Bermuda	30.11	[3] −0.05	30.32	10th	29.70	8th.
Horta, Azores	30.16	[3] +0.03	30.38	17th	29.90	8th.
Lerwick, Shetland Islands	30.19	[3] +0.47	30.66	8th	29.43	1st.
Valencia, Ireland	30.13	[3] +0.23	30.69	10th	28.84	1st.
London	30.09	[3] +0.09	30.65	9th	28.82	1st.

[1] No normal available.
[2] From normals shown on Hydrographic Office pilot charts, based on observations at Greenwich mean noon, or 7 a. m., seventy-fifth meridian time.
[3] From normals based on 8 a. m. observations.
[4] And on other date or dates.

The month opened with a deep and widespread depression over the eastern part of the ocean, giving rise to stormy weather on the French, Spanish, and Portuguese coasts. This depression advanced slowly eastward and southeastward and on the 7th was over southern Europe. It was followed by high pressure that advanced from the direction of Iceland and by the 8th anticyclonic conditions were established over the British Isles and adjacent waters. With some interruptions, high pressure prevailed over this general area, as well as western Europe, until the close of the month.

From the 2d to the 7th a series of disturbances caused almost continuous gales along the steamer lanes. The principal area of these gales shifted to the westward day by day until the latter date when it was situated just east of Newfoundland.

Charts VIII–XI portray conditions over the ocean for the 1st, 5th, 6th, and 7th, and show the westward recession of the gale area during the opening week of the month.

On the morning of the 8th quiet conditions prevailed generally, but in the course of the day there was a redevelopment in the neighborhood of Newfoundland and gales were reported in various parts of the area on both that day and the 9th. Two vessels, the Belgian steamship *Henri Jaspar* and the American steamship *Bellepline*, reported winds of hurricane force.

Associated with this reversal of pressure conditions there was a gradual shifting of stormy conditions to the central and western parts of the ocean, where they persisted until the middle of the month.

From about the 17th to 24th a period of quiet weather marked the entire ocean. On the latter date a small but vigorous disturbance developed to the westward of the British Isles, whence it moved southeastward and dissipated over Spain on the 28th. This depression gave rise to strong gales over portions of the eastern steamer lanes and in places to winds of hurricane force.

From the 24th to the 27th there was a general and widespread fall in pressure over the western part of the ocean and on the latter date readings below 29 inches were recorded by vessels to the east of Newfoundland. From these waters a trough of low pressure extended southwestward to Bermuda and moderate to strong gales were experienced in various parts of this extensive area.

The close of the month found a troughlike depression in mid-ocean, extending from Greenland (Julianehaab 28.46 inches on the 28th) to latitude 35° N., where the steamship *Ossining* on the same date reported a pressure of 29.47 inches. From reports at hand it would appear, however, that the depression had lost energy since the preceding day.

Viewing the month as a whole, the weather should probably be characterized as less stormy than the preceding months of December and January. However, it will be noted from the accompanying table of gales that many vessels experienced very heavy weather. Pressure extremes in the Northern Hemisphere in February were not as pronounced as in the other months named and it would appear that the ocean storms were likewise less intense than those that made the preceding months notable in the annals of winter gales on the North Atlantic.

Less than the normal February amount of fog was encountered along the steamer lanes and its occurrence was confined to one or two days as reported east of the fortieth meridian. It was observed on about six days in the neighborhood of the Grand Banks and on about seven days at points along the American coast between Sydney and Norfolk. It also occurred on about seven days along the upper Gulf coast between Florida and eastern Texas.